DOCUMENT RESUME

ED 334 926 HE 024 762

AUTHOR Khammash, Salma B.
TITLE A Comparative Study of Academic Achievement of University Students from the Two Secondary-Systems in Kuwait: 1982 to 1986.
PUB DATE Apr 90
NOTE 34p.; Paper presented at the Annual Meeting of the American Educational Research Association (Boston, MA, April, 1990).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Achievement; College Outcomes Assessment; *College Preparation; Credits; Educational Innovation; Educational Trends; Foreign Countries; Higher Education; *Liberal Arts; *Nontraditional Education; *Science Education; Secondary Education; Sex Differences; *Traditional Schools; Trend Analysis
IDENTIFIERS *Kuwait

ABSTRACT

The study compared college achievement of Kuwaiti students from two secondary programs; a traditional one resulting in a General Secondary School Certificate (GSSC) and a "Unit Credit System" (UCS) which emphasizes more student independence and responsibility and less rote learning. Under both systems, secondary students specialize in either the arts or sciences. The study sample included 581 students (248 GSSC and 333 UCS) for the College of Arts and 555 students (230 GSSC and 325 UCS) for the College of Science. In an examination of first-year performance, findings indicated that students from the UCS system had slightly higher secondary school percent scores for both sexes and both streams (arts and sciences); female students from both streams and both systems (especially the UCS) performed significantly better than males in the College of Arts; students from the traditional system performed better than UCS students in the College of Science for those who enrolled in 1982-85, males from the traditional system had higher college grade point averages than males from the UCS system; more students from the UCS failed courses than from the GSSC in the Arts college but students from both systems failed in equal numbers in the Science college; and more GSSC students (75% compared to 69%) at the College of Science exhibited normal progress. Results suggest that both secondary systems should continue to be evaluated. (Includes 12 references and 13 tables.) (DB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED334926

A COMPARATIVE STUDY OF ACADEMIC ACHIEVEMENT OF UNIVERSITY STUDENTS FROM THE TWO SECONDARY-SYSTEMS IN KUWAIT 1982 to 1986

Salma B. Khammash

Sultan Qaboos University
(University of Michigan)

BEST COPY AVAILABLE

Paper presented at the American Educational Research Association (AERA) Annual Meeting
Boston, Mass., April 1990

ME024762

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

SALMA B. KHAMMASH

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

A COMPARATIVE STUDY OF ACADEMIC ACHIEVEMENT OF UNIVERSITY STUDENTS FROM THE TWO SECONDARY SYSTEMS IN KUWAIT 1982 to 1986

Salma B. Khammash

Kuwait University opened its doors for the first time in the academic year 1966-67, when it accepted 418 students (359 Kuwaitis, and 59 non-Kuwaitis) in two colleges -- College of Arts, and College of Science. The 418 students represented 70% of the total number of students who had passed the traditional General Secondary School Certificate Examination (GSSCE) in its two streams -- Arts or Science. This system also prevails in the secondary school programs throughout the Arab countries including the Gulf States.

In the fall of 1978-79 a new program in the secondary school cycle, the 'Unit Credit System (UCS)' was introduced by the Ministry of Education in some government schools (for Kuwaiti students only) to move in parallel arrangement with the traditional system of the General Secondary School Certificate (GSSC)*. The distinguishing difference between the two preparatory programs is the emphasis on student independence and responsibility and less on rote learning.

The quest for university education by young Kuwaiti men and women graduating from both secondary systems continued to increase at a rapid rate reaching 11202 students in the academic year 1984-85 (approximately 31 times the original number), representing 72% of the total student population of 15470 in Kuwait University's nine colleges. The remaining 28% constitues students from the Gulf States and other Arab countries.

This continuous increase in the number of Kuwaiti students applying for admission to Kuwait's only university

*For details see Khammash, S. Secondary Education in Kuwait: The Dual System. A paper presented at the 1989 AERA Annual Meeting, San Francisco, March 30, 1989.

coupled with a pool of highly qualified applicants has placed more emphasis on the problem of selecting those who will persist in any particular college of the university. Thus the problem of selection and elimination of candidates has become more and more difficult for admissions' officers, for individual students and for society as a whole. University officials, realizing this problem, had called for an extensive evaluation program to assess the academic performance and achievement of Kuwaiti students, who came from the Kuwaiti dual secondary system, in every college of the University for the five-year period of 1982-83 through 1986-87. The academic year 1982-83 was chosen as the first year of the study because it marked the admission of the Unit Credit System (UCS) graduates to Kuwait University for the first time. In the fifth year of the study, 1986-87, the University had adopted a new grading system -- 4-point scale replacing the 9-point scale. As a result, the two grading systems are employed in this investigation.

The discussion in this paper will be limited to students' academic achievement in the original colleges namely: College of Arts where students from both streams -- Arts or Science are admitted, and the College of Science where students from the Science-stream only are admitted, during the five academic years 1982 to 1986. The main purpose of the study, therefore, was to examine and compare the academic performance and achievement of two groups of Kuwaiti students: a) graduates of the traditional General Secondary School Certificate (GSSC), and b) graduates of the new system -- the Unit Credit System (UCS) who entered Kuwait University as first-time freshmen in the fall semesters of 1982 through 1986.

It was hypothesized that there were significant differences between the two groups of Kuwaiti students from both secondary systems with respect to academic persistence and achievement and certain variables such as: 1) sex, 2) secondary school percent-score and range

at admission, 3) type of stream -- Arts or Science, and college of admission to the University -- College of Arts and College of Science over a period of five years. Several educational issues inherent in the hypotheses examined the relationship of these variables to student academic persistence, withdrawal and/or failure in the two colleges.

Methods

The study sample of 581 students (248 GSSC and 333 UCS) for the College of Arts, and 555 students (230 GSSC and 325 UCS) for the College of Science selected from the university Kuwaiti student population was stratified by 1) sex, 2) secondary school percent-score range at admission, 3) stream type -- Arts or Science, 4) college of admission and 5) year of admission to the University. Nationality 'Kuwaiti' was treated as a constant. Kuwaiti students who came from private secondary schools were excluded from the study. Tables 1 and 2 show sample distribution for both colleges according to sex and certificate type and stream.

The variables used in the study included pre and post admission academic variables as well as relevant non-academic variables. The student's cumulative grade-point average (CGPA) was computed for all courses taken for credit towards a degree program, and was selected as the criterion-of-success for those who persisted and graduated (1982-85, and 1983-86). The CGPA at the time of final disciplinary action was considered for those who were dismissed because of academic difficiency, and the last available CGPA was noted for the dropouts and the withdrawals. The first-year GPA for those who were admitted in the fall of 1986 was selected as a measure for comparison purposes only.

All of the needed information was secured from the students' official documents from the Office of Admissions Registration at Kuwait University. Statistical methods

utilized in the analyses included chi square, student t-test, multiple correlation and stepwise regression analysis. The data were analyzed using the SPSS computing program provided by the Center for Computer Services at Kuwait University.

Results

When the secondary school percent score (the only criterion of acceptance to the university) and its range were analyzed for the GSSC and the UCS groups in the study, the results in the College of Arts indicated that those who came from the Unit Credit System (UCS) had slightly higher percent scores than their counterparts from the General Secondary School Certificate (GSSC) for both sexes and streams (Arts or Science) as shown in Table 3. Similar results were observed for both sexes of the Science-stream in the College of Science (Table 4).

The results for the first-year performance at the College of Arts showed that female students from both streams in both systems, and especially the UCS, had performed significantly better than males from both streams in both systems. The same was also true when the cumulative grade-point averages (CGPAs) for the same students were compared for both sexes from both systems for the four academic years 1982-85 (Table 5). As for the 1986-87 academic year females from the UCS-Arts stream also outperformed males from both systems in their first year at the College of Arts (Table 6).

The results for the College of Science, however, have indicated that males and females, from the traditional system, the GSSC, had performed better than their counterparts from the Unit Credit System in their first year in college for those who enrolled years 1982-85 (Table 7), while the opposite was true for the first-year students of 1986-87

for both sexes (Table 8). When the cumulative grade-point averages were analyzed for the years 1982-85 the results showed that females from both systems had significantly higher CGPAs than males from both systems, and males from the GSSC system outperformed their counterparts from the Unit Credit System (Table 7).

When the frequency of course failure was analyzed for both colleges over the period of the five years of the study, the results for the College of Arts indicated that more students from both systems had encountered problems in their courses in the years 1984-85 and 1985-86 than in earlier years of the study. In general, students from the UCS appeared to fail in many more courses than their counterparts from the GSSC system (Table 9).

In the College of Science the analysis of course failure showed that students from both systems had also encountered difficulties in their courses equally. As seen in Table 10 the percentages for the five-year total did verify this fact for the Science-stream students from the two systems -- the GSSC and the UCS.

As the data for academic status including academic disciplinary action for students from both systems were analyzed the results for the five-year period in the College of Arts indicated that more UCS students than GSSC had persisted in the form of normal progress; 74% to 66%, while more GSSC students than UCS had left the College in the form of dropouts and withdrawals; 25% to 16%. Slightly more UCS students than their counterparts were dismissed from the college for academic difficiency; 8% as compared to 5% (Table 11).

The results for student academic status in the College of Science pointed out that contrary to results discussed earlier at the College of Arts, the percentages with regard

normal progress favored the GSSC group over the UCS; 75% to 69%. On the other hand, four percent of the UCS as compared to two percent of the GSSC had incurred academic dismissal from the university. The percentages for the dropouts were almost the same for both groups; 11% for the GSSC and 9% for the UCS group over the period of the five years of the study (Table 12).

When the stepwise regression analysis was applied the results showed that the first-year grade average (1st-Yr-GPA) had prevailed as the best predictive measure of academic persistence and achievement for Kuwaiti students from both systems (the GSSC and the UCS) for both streams (Arts or Science) in both colleges, College of Arts and College of Science. The percent-score at admission was found to be of no significance beyond the student's first year at the University. Sex (female) ranked as a third predictor after the major-GPA (MAJ-GPA) for students in the College of Arts, while the percent-score at admission was placed a distant third in the College of Science for both sexes of the Science-stream in both systems (Table 13).

Conclusions and Recommendations

It was concluded that academic persistence and achievement for Kuwaiti men and women students from both secondary school systems could be differentiated significantly for both colleges: a) College of Arts where students from both streams -- Arts or Science, are admitted to the College's seven departments, and b) College of Science where students from the Science-stream only are admitted to the College's seven departments. Moreover, significant differences were apparent between students from both systems and streams with respect to course-failure, withdrawal and academic dismissal for both sexes in both colleges.

It was observed throughout the study that female students from both systems, the GSSC and the UCS in both streams (Arts or Science) had performed significantly better than males in each of the two colleges. This fact was also noted by another study done at Kuwait University (Sherief, 1988). Although female students from the Unit Credit System (UCS) have entered the university with significantly higher percent-score (% score) than their counterparts from the GSSC, the difference soon disappeared once they were at the university.

The main question that concerns educators and administrators at Kuwait University as well as officials at the Ministry of Education remains -- can the secondary school percent-score (% SCORE) at admission predict the student's academic persistence and success at Kuwait University and its colleges? It was seen from the data presented in this study that although the percent-score at admission for students from both secondary systems, the GSSC and the UCS at Kuwait University had correlated significantly with first-year-GPA, it was not high enough to be considered as a predictive measure of academic persistence and achievement for students from both systems at both colleges -- College of Arts and College of Science. The results of the stepwise regression analysis for the four years 1982-85 indicated that the first-year-GPA (1st-Yr-GPA) had prevailed as the best predictor of academic achievement for students of both streams (Arts or Science) in both systems (GSSC and UCS), while the percent-score (% SCORE) was shown to be of no significance beyond the student's first year at the university.

Since it was established that a large number of students from both systems and streams in the study were encountering difficulty in their courses in both colleges, it was recommended that an extensive investigation to be carried out to examine the type of courses in which these

students were failing; such as 'departmental requirements', 'university requirements' ... etc., in order to assess the relevance of the secondary-school curriculum to the college programs.

It was also recommended that the student's grade-average in the secondary school to be included as a second criterion for admission to the university in addition to his/her percent-score on the General Secondary School Certificate Examination (GSSCE) in either stream for those who graduate from the traditional GSSC. As for the students from the Unit Credit System, the student's grade-average in his/her major in school, for both streams, to be considered as an additional criterion for admission to the university beside the high school GPA which is converted into percent-score for admission purposes.

Discussion and Implications

Based on the information presented in this paper, the writer believes that both secondary school programs, the 'traditional' or the General Secondary School Certificate (GSSC) and the comparatively new system, the Unit Credit System (UCS) appeared to be viable at the present time. Since both systems or programs follow a planned curriculum emanating from one centralized source, namely -- the curriculum department of Kuwait Ministry of Education, the main differences between them therefore, lie in the distinct and innovative objectives of the Unit Credit System (UCS). These objectives encompassing course-distribution, teaching methods, and student evaluation were designed to recognize and meet the individual student's abilities, skills, tendencies and potentials. Unfortunately, these procedures are not exercised or followed in the 'traditional' program of the General Secondary School Certificate (GSSC). Obviously, the

Unit Credit System is gaining momentum in the Kuwaiti society and its educational system, and it should be allowed to mature before a conclusive judgement regarding its existence and continuation can be made in comparison with the well founded and long practiced traditional program known as the General Secondary School Certificate.

The information provided in this evaluative study has several important implications: First, it will be of value to Kuwaiti educators and officials at Kuwait University and its colleges in clarifying and assessing the records of the educational attainment of male and female Kuwaiti students from both secondary school programs -- the GSSC and the UCS, who are entering Kuwait University in large numbers to pursue their studies in higher education.

Second, the results of this study should prove valuable to policy makers in making decisions regarding both secondary (Ministry of Education) and postsecondary education (Ministry of Higher Education) in Kuwait as well as the Gulf States and the rest of the Arab countries. It should be noted here that Kuwait is the first country in the Arab World to adopt the Unit Credit System (UCS) in its secondary school cycle of the educational ladder, and other countries are waiting to find out how successful the UCS program has been in Kuwait before they make their decisions.

Finally, the information furnished by the study will be of value to American educators and officials of universities and colleges in appraising the records of the educational achievements of Kuwaiti students from both secondary-school systems who are coming in great numbers to the United States to pursue their studies in higher and postgraduate education.

- - -

Table 1

GSSC AND UCS KUWAITI STUDENTS DISTRIBUTION
ACCORDING TO TYPE AND SEX
COLLEGE OF ARTS - FIVE YEARS (1982-86)

N = 581

Certificate Type & Stream	Male N	Male %	Female N	Female %	Total N	Total %
GSSC- Arts	63	42.0	166	38.5	229	39.5
GSSC-Science	8	5.0	11	2.5	19	3.0
UCS - Arts	69	46.0	241	56.0	310	53.5
UCS -Science	11	7.0	12	23.0	23	4.0
Total	151	100.0	430	100.0	581	100.0

Table 2

GSSC AND UCS KUWAITI STUDENTS DISTRIBUTION
ACCORDING TO TYPE AND SEX
COLLEGE OF SCIENCE - FIVE YEARS (1982-86)

N = 555

Certificate Type & Stream	Male N	Male %	Female N	Female %	Total N	Total %
GSSC-Science	95	45.0	135	39.0	230	41.0
UCS -Science	116	55.0	209	61.0	325	59.0
Total	211	100.0	344	100.0	555	100.0

Talbe 3

GSSCE AND UCS PERCENT SCORE DISTRIBUTION
KUWAITI STUDENTS - FIVE YEARS (1982-86)
COLLEGE OF ARTS

N = 581

GSSCE & UCS % Score Ranges	1982-83* GSSCE	UCS	1983-84 GSSCE	UCS	1984-85 GSSCE	UCS	1985-86 GSSCE	UCS	1986-87# GSSCE	UCS
95.1 - 99.9	-	-	-	1	-	-	-	1	-	2
90.1 - 95.0	-	-	-	-	-	3	-	1	1	4
85.1 - 90.0	-	-	2	3	1	2	4	6	6	12
80.1 - 85.0	-	-	1	2	3	6	5	8	6	12
75.1 - 80.0	-	-	2	3	7	11	11	12	16	14
70.1 - 75.0	-	-	3	4	3	6	16	19	10	11
65.1 - 70.0	-	-	12	18	23	33	-	-	13	14
60.1 - 65.0	3	4	8	15	39	46	-	-	-	-
55.1 - 60.0	7	9	14	18	27	29	-	-	-	-
50.1 - 55.0	2	2	1	-	-	-	1	1	-	-
45.1 - 50.0	1	1	-	-	-	-	-	-	-	-
Total	13	16	43	64	103	136	37	48	52	69

*Only UCS male students were admitted 1982-83.
#First year level students.

Table 4

GSSCE AND UCS PERCENT SCORE DISTRIBUTION
KUWAITI STUDENTS - FIVE YEARS (1982-86)
COLLEGE OF SCIENCES

N = 555

GSSCE & UCS % Score Ranges	1982-83* GSSCE	UCS	1983-84 GSSCE	UCS	1984-85 GSSCE	UCS	1985-86 GSSCE	UCS	1986-87# GSSCE	UCS
95.1 - 99.9	-	-	-	4	-	4	-	3	-	-
90.1 - 95.0	-	-	-	4	2	4	2	4	3	9
85.1 - 90.0	-	-	1	1	1	4	6	7	5	8
80.1 - 85.0	-	-	2	8	2	10	13	18	8	13
75.1 - 80.0	-	-	2	2	4	7	6	10	10	12
70.1 - 75.0	1	1	2	2	3	5	16	13	27	32
65.1 - 70.0	3	4	5	9	5	6	25	25	25	27
60.1 - 65.0	5	7	6	7	10	13	20	22	2	5
55.1 - 60.0	5	5	4	5	3	5	-	-	-	-
Total	14	17	22	42	30	58	84	102	80	106

*Only UCS male students were admitted 1982-83.
#First year level students.

Salma Khamnash
AERA, 1990

Table 5

GSSCE AND OCS STREAM AND SEX DISTRIBUTION
ACCORDING TO DIFFERENCES IN THE MEANS OF ACADEMIC VARIABLES
KUWAITI STUDENTS - FOUR YEARS (1982-1985)*
COLLEGE OF ARTS

N = 480

Academic Variables	1 M-GSC Arts N=59	2 F-GSC Arts N=123	3 M-OCS Arts N=64	4 F-OCS Arts N=179	5 M-GSC Sc N=7	6 F-GSC Sc N=7	7 M-OCS Sc N=11	8 F-OCS Sc N=10	t - ratios 1:2	1:3	1:4	1:5	1:6	1:7	1:8	2:3	2:4	2:5	2:6	2:7	2:8	3:4	3:5	3:6	3:7	3:8	4:5	4:6	4:7	4:8	5:6	5:7	5:8	6:7	6:8	7:8
GSSCE & OCS X Score																																		
Mean	61.7	69.5	61.5	70.2	56.8	65.4	61.5	73.0	-6.5**	0.3	-6.8**	2.7**	-2.0*	0.1	-5.5**	6.8**	-0.6	3.8**	1.2	3.0**	-1.8	-7.0**	2.4*	-2.0*	-0.1	-1.8**	3.8**	1.4	3.1**	-1.8	-2.8*	-1.7	-3.1**	1.3	-1.8	-2.8*
S.D.	4.5	8.7	4.8	9.1	5.3	6.0	6.9	12.0																												
1st-Yr-GPA																																		
Mean	2.09	3.30	2.18	3.42	3.03	4.78	1.86	4.25	-4.3**	-0.3	-5.0**	-1.3	-3.7**	0.7	-3.3**	4.3**	-0.8	0.4	-2.2*	2.9**	-1.6	-5.3**	-1.6	-5.0**	1.1	-4.3**	0.8	-2.1*	3.2*	-1.5	-3.1**	1.5	-1.4	3.5**	0.8	-2.8*
S.D.	1.9	1.7	1.5	1.7	1.2	0.9	2.2	2.0																												
Cum-GPA																																		
Mean	1.84	3.33	2.33	3.40	3.20	3.84	2.33	4.33	-5.8**	-1.8	-7.0**	-2.1*	-3.1**	-0.8	-4.4**	4.2**	-0.4	0.2	-0.8	2.0*	-1.8	-5.2**	-1.8	-2.8*	0.1	-4.2**	0.4	-0.8	2.4*	-2.0*	-1.2	1.0	-1.6	1.7	-0.7	-2.3*
S.D.	1.6	1.6	1.4	1.4	1.0	1.1	2.2	1.7																												

*Only OCS male students were admitted 1982-1983.
*Statistically significant at p≤.05.
**Statistically significant at p≤.01.

BEST COPY AVAILABLE

Table 6

GSSCE AND UCS STREAM AND SEX DISTRIBUTION
ACCORDING TO DIFFERENCES IN THE MEANS OF ACADEMIC VARIABLES
KUWAITI STUDENTS - ADMISSION YEAR 1986-87*•
COLLEGE OF ARTS

N = 121

Academic Variables	1 M-GSC Arts N=4	2 F-GSC Arts N=43	3 M-UCS Arts N=5	4 F-UCS Arts N=62	5 M-GSC Sc. N=1	6 F-GSC Sc. N=4	7 M-UCS Sc. N=0	8 F-UCS Sc. N=2	t - ratios 1:2	1:3	1:4	1:5	1:6	1:7	1:8	2:3	2:4	2:5	2:6	2:7	2:8	3:4	3:5	3:6	3:7	3:8	4:5	4:6	4:7	4:8	5:6	5:7	5:8	6:7	6:8	7:8
GSSCE & UCS % Score																																			
Mean	72.0	77.3	70.0	75.2	70.0	72.2	-	86.5	-1.*	1.0	-2.0*	0.4	-0.1	-	-4.6*	2.5*	-1.6	1.1	1.8	-	-1.9	-2.7**	-0.2	-1.1	-	-8.8**	1.2	1.8	-	-1.1	-0.4	-	-6.0	-	-4.4*	-
S.D.	4.2	6.1	0.8	8.1	0.0	4.2	-	2.1																												
1st-Yr-GPA																																			
Mean	0.88	1.35	1.07	1.31	-	1.58	-	2.03	-2.2*	-0.7	-3.0**	-	-1.3	-	-2.4	1.6	-0.2	-	0.5	-	-0.8	-2.2*		-0.8	-	-2.0		0.8	-	-0.9		-		-1.0	-
S.D.	0.8	1.0	0.8	0.9	-	1.0	-	0.5																											
Cum-GPA																																			
Mean	0.88	1.35	1.07	1.31	-	1.58	-	2.03	-2.2*	-0.7	-3.0**	-	-1.3	-	-2.4	1.6	-0.3	-	0.5	-	-0.8	-2.2*		-0.8	-	-2.0		0.8	-	-0.9		-		-1.0	-
S.D.	0.8	1.0	0.8	0.8	-	1.0	-	0.5																											

*First year-level students.
•New grading system (4.0 point system).
*Statistically significant at p≤.05.
**Statistically significant at p≤.01.

BEST COPY AVAILABLE

Salma Khammash
AERA, 1990

Table 7

GSSCE AND UCS STREAM AND SEX DISTRIBUTION
ACCORDING TO DIFFERENCES IN THE MEANS OF ACADEMIC VARIABLES
KUWAITI STUDENTS - FOUR YEARS (1982-1985)#
COLLEGE OF SCIENCES

N = 369

Academic Variables	1 M-GSC Sc. N=60	2 F-GSC Sc. N=90	3 M-UCS Sc. N=75	4 F-UCS Sc. N=144	t - ratios 1:2	1:3	1:4	2:3	2:4	3:4
GSSCE & UCS % Score										
Mean	63.5	75.1	64.5	78.7	-9.8**	-1.1	-9.8**	9.4**	-2.8**	-9.5**
S.D.	3.7	8.2	5.7	9.3						
1st-Yr-GPA										
Mean	1.92	3.36	1.33	3.20	-4.7**	2.1*	-4.6**	7.0**	0.7	-7.0**
S.D.	1.7	2.0	1.5	1.8						
Cum-GPA										
Mean	2.15	3.55	1.86	3.34	-4.7**	0.9	-4.6**	5.8**	0.9	-6.0**
S.D.	1.6	1.9	1.8	1.7						

#Only UCS male students were admitted 1982-1983.
*Statistically significant at p≤.05.
**Statistically significant at p≤.01.

Selma Khammash
AERA, 1990

Table 8

GSSCE AND UCS STREAM AND SEX DISTRIBUTION
ACCORDING TO DIFFERENCES IN THE MEANS OF ACADEMIC VARIABLES
KUWAITI STUDENTS - ADMISSION YEAR 1986-87#+
COLLEGE OF SCIENCES

N = 186

Academic Variables	1 M-GSC Sc. N=35	2 F-GSC Sc. N=45	3 M-UCS Sc. N=41	4 F-UCS Sc. N=85	t - ratios 1:2	1:3	1:4	2:3	2:4	3:4
GSSCE & UCS % Score										
Mean	70.3	77.4	70.4	78.8	-5.0**	-0.2	-5.8**	-5.0**	-0.9	-5.8**
S.D.	3.9	7.6	5.1	8.2						
1st-Yr-GPA										
Mean	0.63	1.83	0.80	1.45	-7.0**	-0.9	-5.0**	5.5**	2.3*	-3.8**
S.D.	0.8	0.7	1.0	0.8						
Cum-GPA										
Mean	0.63	1.83	0.80	1.45	-7.0**	-0.9	-5.0**	5.5**	2.3*	-3.8**
S.D.	0.8	0.7	1.0	0.8						

#First year level students.
+New grading system (4.0 point system).
*Statistically significant at $p \leq .05$.
**Statistically significant at $p \leq .01$.

Salma Khamnash
AERA, 1990

Table 9

GSSCE AND UCS - COURSE FAILURE DISTRIBUTION
KUWAITI STUDENTS - FIVE YEARS (1982-1986)
COLLEGE OF ARTS

N = 581

Course Failure	1982-83* GSSCE N=13	1982-83* U C S N=16	1983-84 GSSCE N=43	1983-84 U C S N=64	1984-85 GSSCE N=103	1984-85 U C S N=136	1985-86 GSSCE N=37	1985-86 U C S N=48	1986-87# GSSCE N=52	1986-87# U C S N=69	TOTAL GSSCE N=248	TOTAL U C S N=333
NONE	7 (55%)	4 (25%)	12 (28%)	12 (19%)	24 (23%)	19 (15%)	18 (48%)	23 (48%)	32 (61%)	39 (57%)	93 (38%)	97 (30%)
1 to 5 courses	4 (30%)	6 (38%)	25 (58%)	39 (60%)	60 (58%)	89 (65%)	16 (43%)	20 (42%)	19 (37%)	27 (39%)	124 (50%)	181 (54%)
6 to 10 courses	2 (15%)	5 (31%)	6 (14%)	12 (19%)	18 (18%)	25 (18%)	2 (6%)	3 (6%)	1 (2%)	3 (4%)	29 (11%)	48 (14%)
11 to 15 courses	-	1 (6%)	-	1 (2%)	1 (1%)	3 (2%)	1 (3%)	2 (4%)	-	-	2 (1%)	7 (2%)

*Only UCS male students were admitted in 1982-83.
#First year level students.

Table 10

GSSCE AND UCS - COURSE FAILURE DISTRIBUTION
KUWAITI STUDENTS - FIVE YEARS (1982-1986)
COLLEGE OF SCIENCES

N = 555

Course Failure	1982-83* GSSCE N=14	1982-83* U C S N=17	1983-84 GSSCE N=22	1983-84 U C S N=42	1984-85 GSSCE N=30	1984-85 U C S N=58	1985-86 GSSCE N=84	1985-86 U C S N=102	1986-87# GSSCE N=80	1986-87# U C S N=106	TOTAL GSSCE N=230	TOTAL U C S N=325
NONE	3 (21%)	6 (35%)	7 (32%)	11 (26%)	4 (14%)	12 (21%)	21 (25%)	29 (28%)	34 (42%)	42 (40%)	69 (30%)	100 (31%)
1 to 5 courses	7 (50%)	8 (47%)	10 (45%)	21 (50%)	20 (66%)	36 (62%)	51 (61%)	58 (57%)	45 (56%)	62 (58%)	133 (58%)	185 (57%)
6 to 10 courses	4 (29%)	3 (18%)	4 (18%)	9 (21%)	6 (20%)	10 (17%)	12 (14%)	15 (15%)	1 (2%)	2 (2%)	27 (12%)	39 (12%)
11 to 15 courses	-	-	1 (5%)	1 (3%)	-	-	-	-	-	-	1 (0.0)	1 (0.0)

*Only UCS male students were admitted in 1982-83.
#First year level students.

Table 11

GSSCE AND UCS - STUDENT STATUS (1986-87)
KUWAITI STUDENTS - FIVE YEARS (1982-1986)
COLLEGE OF ARTS

N = 581

Student Status	1982-83* GSSCE N=13	1982-83* U C S N=16	1983-84 GSSCE N=43	1983-84 U C S N=64	1984-85 GSSCE N=103	1984-85 U C S N=136	1985-86 GSSCE N=37	1985-86 U C S N=48	1986-87# GSSCE N=52	1986-87# U C S N=69	Total GSSCE N=248	Total U C S N=333
Graduates	4 (30%)	3 (18.75%)	5 (12%)	3 (5%)	-	-	-	-	-	-	9 (4%)	6 (2%)
Normal Progress	5 (38%)	3 (18.75%)	24 (55%)	45 (70%)	62 (60%)	90 (66%)	33 (88%)	44 (92%)	41 (79%)	64 (92%)	165 (66%)	246 (74%)
Dismissals	1 (8%)	4 (25%)	3 (7%)	9 (14%)	9 (9%)	13 (9.5%)	-	-	-	-	13 (5%)	26 (8%)
Drop-outs	2 (16%)	3 (18.75%)	6 (14%)	2 (3%)	10 (10%)	9 (6.5%)	1 (3%)	2 (4%)	6 (12%)	3 (4%)	25 (10%)	19 (6%)
Withdrawals and Other	1 (8%)	3 (18.75%)	5 (12%)	5 (8%)	22 (21%)	24 (18%)	3 (9%)	2 (4%)	5 (9%)	2 (4%)	36 (15%)	36 (10%)

*Only UCS male students were admitted in 1982-83.
#First year level students.

Table 12

GSSCE AND UCS - STUDENT STATUS (1986-87)
KUWAITI STUDENTS - FIVE YEARS (1982-1986)
COLLEGE OF SCIENCES

N = 555

Student Status	1982-83* GSSCE N=14	1982-83* U C S N=17	1983-84 GSSCE N=22	1983-84 U C S N=42	1984-85 GSSCE N=30	1984-85 U C S N=58	1985-86 GSSCE N=84	1985-86 U C S N=102	1986-87# GSSCE N=80	1986-87# U C S N=106	Total GSSCE N=230	Total U C S N=325
Graduates	3 (21%)	1 (6%)	1 (5%)	8 (19%)	-	-	-	-	-	-	4 (2%)	9 (3%)
Normal Progress	2 (15%)	7 (40%)	16 (72%)	20 (48%)	23 (77%)	31 (54%)	70 (83%)	84 (83%)	61 (76%)	82 (76%)	172 (75%)	224 (69%)
Dismissals	3 (21%)	1 (6%)	1 (5%)	4 (9%)	-	7 (12%)	-	-	1 (2%)	-	5 (2%)	12 (4%)
Drop-outs	4 (28%)	4 (24%)	2 (9%)	6 (15%)	4 (13%)	9 (15%)	4 (5%)	3 (2%)	11 (14%)	10 (10%)	25 (11%)	32 (9%)
Withdrawals and Other	2 (15%)	4 (24%)	2 (9%)	4 (9%)	3 (10%)	11 (19%)	10 (12%)	15 (15%)	7 (9%)	14 (14%)	24 (10%)	48 (15%)

*Only UCS male students were admitted in 1982-83.
#First year level students.

Table 13

STEPWISE REGRESSION ANALYSIS OF PREDICTIVE VARIABLES OF ACADEMIC ACHIEVEMENT ACCORDING TO COLLEGES - KUWAITI STUDENTS FOUR YEARS (1982 - 1985)

College	Predictive Variable	R^2	Beta Wt.	F-ratio*
Arts (N=460)				
	1. 1ST-Yr-GPA	.71	.58	366.5
	2. MAJ-GPA	.80	.40	213.0
	3. SEX (female)	.81	.18	15.0
	4. % SCORE	.82	.07	8.5
Science (N=369)				
	1. 1ST-YR-GPA	.68	.65	385.5
	2. MAJ-GPA	.72	.42	89.3
	3. % SCORE	.74	.30	12.5

*Statistically significant $p<.01$.

BIBLIOGRAPHY

Khammash, S.B. A Longitudinal Study of Academic Performance in the Faculty of Arts - The University of Jordan. Amman, Jordan: The Royal Scientific Society Press, 1978.

Khammash, S.B. Secondary Education in Kuwait: The Dual System. A paper presented at the 1989 AERA Annual Meeting, San Francisco, March 30, 1989.

Khammash, S.B. A Comparative Study of Academic Performance of Kuwait University Students from the Dual Secondary System, 1982-83 to 1986-87. Amman, Jordan: The Royal Scientific Society Press, 1989.

Kuwait Ministry of Education, Directory for Sabah al-Salem Unit Credit System (U.C.S.). Kuwait: Kuwait Ministry of Education Press, 1986, 'Arabic'.

Kuwait Ministry of Education, Report on the Secondary School Cycle in the State of Kuwait. Kuwait: Kuwait Ministry of Education Press, 1985, 'Arabic'.

Kuwait Ministry of Education, Report on the Development of Secondary School Curriculum in the State of Kuwait. Kuwait: Kuwait Ministry of Education Press, 1986,'Arabic'.

Kuwait University, Annual Report of 1983 - 1984. Kuwait: Kuwait University Press, 1984.

Kuwait University, Annual Report of 1984 - 1985. Kuwait: Kuwait University Press, 1985.

Kuwait University, General Catalog 1985 - 1987. Kuwait: Kuwait University Press, 1985.

Kuwait University, General Undergraduate Catalog 1987 - 1989. Kuwait: Kuwait University Press, 1987.

Kuwait University - Office of the Vice Rector for Academic Affairs, A Study of Admission Policies at Kuwait University for the Years 1986 - 1990. Kuwait: Kuwait University, 1986.

Sherief, N., "A Comparative Study Between the Credit and Traditional School Systems in Level of Academic Performance and its Predictability." The Educational Journal, College of Education, Kuwait University Kuwait, Vol. 4, 1988, 'Arabic'.